

REMARKS

Status of Claims

Claims 1, 3-5, 7-9, 15-21, 31, 32, 36-38, 43, 45 and 47-50 are pending in the application.

Claims 3-5, 16-18, 19-21, 31-32, 36-38, 43, and 47-50 are withdrawn.

Claims 1 and 15 have been amended.

Claims 51-54 are new.

Claims 1, 7-9, 15, 45, and 51-54 are presented for consideration.

The Examiner has advanced a Restriction Requirement.

With respect to the restriction requirement, the Examiner requires Applicants to elect one of ten (10) inventions or groups of inventions which allegedly are not so linked as to form a single general inventive concept under PCT Rule 13.1.

Group I, claims 1, 7-9, 15, and 45 drawn to an isolated nucleic acid molecule of an alternative splicing variant of a human T-type calcium channel subunit, an expression vector, a recombinant host cell and a human cell line.

Group II, claims 3-5, drawn to a substantially pure polypeptide comprising and amino acid sequence encoded by SEQ ID NO.: 18 or 20 or the amino acid sequence of SEQ ID NO: 19 or 21.

Group III, claims 16-18, drawn to a method of identifying compounds capable of binding to the polypeptide of Group II and modulating its activity.

Group IV, claims 19-21, drawn to a method of detecting an $\alpha 1$ isoform in a biological sample.

Group V, claims 31-32, drawn to a method for treating a subject having a stroke.

Group VI, claims 36-37, drawn to a method for identifying lead compounds for a pharmacological agent useful in the treatment of disease associated with the increase/decrease voltage regulated calcium influx mediated by a human T-type calcium channel.

Group VII, claim 38, drawn to a method for identifying compound which selectively bind a human T-type calcium channel $\alpha 1$ -1 subunit isoform.

Group VIII, claim 43, drawn to an isolated antibody which specifically binds to the polypeptide of Group II.

Group IX, claim 47, drawn to a method of producing the recombinant protein.

Group X, claims 48-50, drawn to a method of identifying compounds that modulate the activity of T-type calcium channel $\alpha 1I-1$ subunit.

The invention herein is directed to alternative splice variants of a human T-type calcium channel subunit, designated as $\alpha 1I-1$ and $\alpha 1I-2$. The nucleotide and amino acid sequences for these variants are set forth in SEQ ID NO.: 18 and 19 and 20 and 21, respectively.

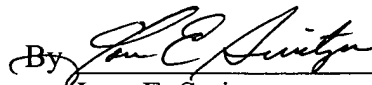
Applicants elect the invention define by Group I (claims 1, 7-9, 15 and 45) and new claims 51-54 which correspond to claims 7-9 and 45 for the $\alpha 1I-2$ variant without prejudice to the prosecution of the non-elected claims in a related patent application. Claims directed to the non-elected inventions have been withdrawn. The requirement for rejoinder of the non-elected process invention set forth in the Office Action are acknowledged and noted.

It is believed that the claims are in a condition for allowance and a notice to that effect is earnestly solicited.

If the Examiner believes that a telephone conference would be of value, she is requested to call the undersigned counsel at the number listed below.

Any additional fees required in connection with this submission may be taken from Merck Deposit Account No. 13-2755.

Respectfully submitted,

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